



NASA PRINCIPAL CENTER FOR REGULATORY RISK ANALYSIS AND COMMUNICATION

NASA's Agency-Wide Strategy for Environmental Regulatory Risk Analysis and Communication

Sharon Scroggins
NASA Marshall Space Flight Center
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Agenda

- **Overview: Principal Center for Regulatory Risk Analysis and Communication (RRAC PC)**
- **Regulatory Tracking and Communication Process**





RRAC PC Overview

- **NASA's Agency-wide resource for identifying and managing risks associated with changing environmental regulations**
- **Goals of the RRAC PC**
 - Proactively detect, analyze and communicate environmental regulatory risks to NASA Programs and facilities
 - Communicate with regulators and participate in the mitigation of such risks
 - Provide centralized support on emerging regulations to NASA HQ Environmental Management Division





RRAC PC Focus in Perspective

Risks posed by the Program to the environment

- Identified under NEPA through the Environmental Impact Statement (EIS) process **prior to Program inception**
- The EIS describes programmatic options and addresses environmental considerations associated with each, usually in a one-time effort

Risks posed to the Program by environmentally-related drivers

- On-going effort through the life of the Program
- Risk to Program grows with time due to changes in laws and regulations
- Active participation in legislative and rulemaking processes reduces Program risk



Regulations Can Drive Program Risks

Changing regulations have the potential to affect program activities directly and indirectly

- Could **restrict certain activities, operations, or right to operate**
 - Changes in operational activities
 - ❖ *High-efficiency spray equipment*
 - ❖ *Quantities of thinner allowed for coating application*
 - Limitations on where or how operations can take place
 - ❖ *In spray booths rather than “in the field”*
 - ❖ *Require dipping or brushing instead of spraying*
 - Changes to protective equipment requirements
- Could **affect availability and usage of materials**
 - Production phase-out or restriction on ability to apply or use materials
 - ❖ *ODSs, brominated flame retardants, and others*
 - Formulation changes by vendors to critical materials and/or components
 - ❖ *Despite contractual notification clauses, can happen without notification*
 - May require material replacement efforts
 - ❖ *Replacement costs; potential schedule impacts; potential performance variance*



Regulatory Tracking Process

RRAC PC Regulatory Monitoring

- Evolving applicability and relevance guidelines
 - Programmatic
 - ❖ *human spaceflight, other space vehicles, aeronautics programs*
 - ❖ *direct and indirect impacts*
 - ❖ *critical supply chain issues*
 - Facilities
 - ❖ *NASA Centers*
 - ❖ *Other critical processing facilities*
 - ❖ *Emergency landing sites abroad*

Lesson Learned

Recognize that the requirements of Programs and supporting Facilities CHANGE and that those changes can affect the applicability of emerging regulatory requirements

- Example: Regulatory applicability thresholds



Regulatory Tracking Process

RRAC PC Regulatory Monitoring

- Monitor emerging regulatory information from appropriate sources

- “Official” Sources

- ❖ *Federal Register and Semiannual Regulatory Agenda*
 - ❖ *State regulatory notices*
 - ❖ *Other countries and international organizations*

- Other Sources

- ❖ *Regular communication with regulators*
 - ❖ *Networks with other stakeholders, especially other Federal agencies*
 - ❖ *Industry concerns*
 - ❖ *Global trends*

1. **Statutory and regulatory requirements CHANGE**
2. **Just because a requirement doesn't affect you directly, doesn't mean it will not impact your operations at some point in time**
3. **The best information on emerging requirements is often found on the “grapevine”**
 - **Example: European Union regulations and international partnerships**

Lessons Learned



RRAC PC Regulatory Communication

- **When significant regulatory changes are identified, timely communication is essential**
 - Communication of changing requirements to the regulatory stakeholders – NASA Programs and Facilities
 - Communication of potential issues to management and, when appropriate, back to the regulating agency





RRAC PC Regulatory Communication

- Communicate regulatory changes to the affected NASA Community
 - General alerts and summaries
 - Specifically-targeted technical working groups
- Solicit feedback on potential impacts from emerging regulatory changes
 - Direct or indirect impacts
 - Short-term or long-term
 - Include worst-case scenario

Lessons Learned →

1. Insist on knowing your technical community; they are the ones who know when a “potential impact” becomes an “issue”
2. For potentially mission-critical impacts, don’t assume the information will filter to the right person or organization – **HUNT THEM DOWN**
3. Don’t assume your Program is immune just because the requirement doesn’t directly affect you – you rely on your **SUPPLY CHAIN**
4. In determining potential impacts, be twice as pessimistic as the life of your Program



Regulatory Communications Process

RRAC PC Regulatory Communication

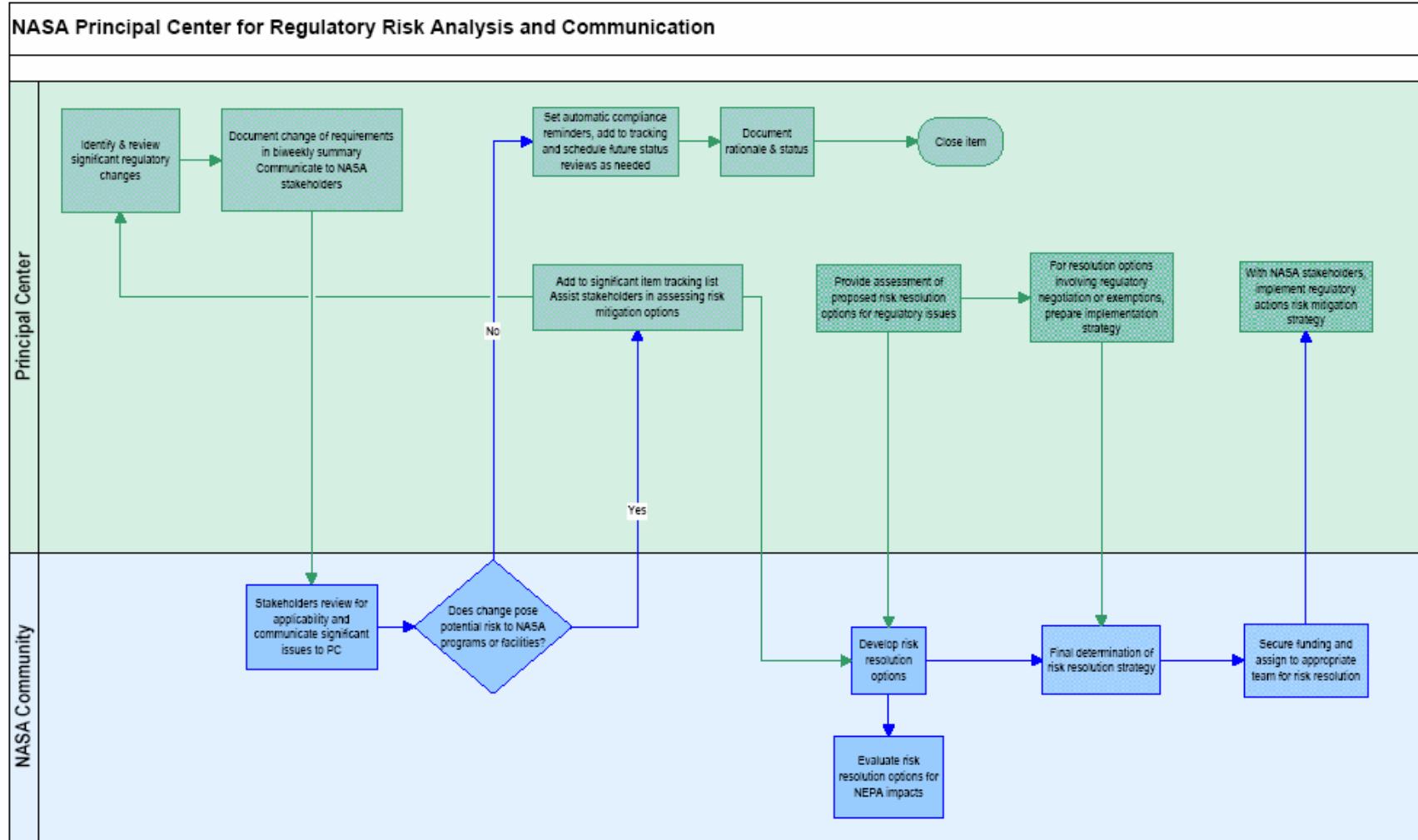
- **Communicate identified impacts to management**
 - Assess mitigation options
 - Follow the “greenest” path that still meets Mission requirements
- **When necessary, communicate issues to regulators**
 - Sometimes mission-critical technical performance or safety-related factors must be considered
 - Collaboration with regulators can produce effective, innovative regulatory solutions

Lessons Learned

1. Honest, open bilateral communications with regulators is essential
2. Focusing on technical requirements, data, and Mission success goes a long way toward establishing credibility
3. A clear, proven COMMITMENT TO DO THE RIGHT THING speaks volumes



RRAC PC Program Support: “Swim Lanes”





RRAC PC Lessons Learned

- **Programs and Centers are dynamic... so are regulations**
 - Just because regulations may not initially apply does not mean they will not in the future
 - Just because regulations may not directly affect operations does not mean they won't affect the program indirectly through the supply chain
- **Communication is key when it comes to regulatory impacts**
 - Up and down the chain of command to ensure the right organizations and people are informed
- **Maintaining a “do the right thing” commitment is critical to the long-term success of programs and should be a significant part of a strategy for compliance**



Questions?

- **For further information, please contact:**

Sharon Scroggins, NASA/MSFC

256-544-7932

sharon.scroggins@nasa.gov

<http://www.rracpc.org/>